

In the Claims

1 – 15 (Cancelled)

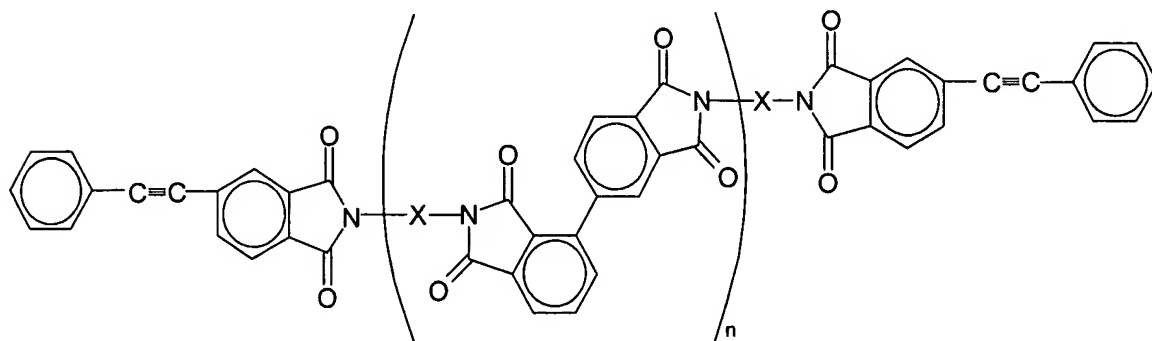
16. (New) A foamed polyimide shaped article obtained by molding and then calcining a mixture of pulverized pieces of a pre-foamed polyimide resin mass and a heat resistant binder selected from the group consisting of polyamic acids and end-modified imide oligomers.

17. (New) The foamed polyimide shaped article as set forth in claim 16, wherein the pre-foamed polyimide resin mass is comprised of a polymer obtained using as an essential component a 2,3,3',4'-biphenyl tetracarboxylic acid component as an aromatic tetracarboxylic acid component.

18. (New) The foamed polyimide shaped article as set forth in claim 16, wherein the pre-foamed polyimide resin mass is obtained using as a diamine component a diamine having two amino groups in a molecule or an amine compound comprised of a mixture of diamine having two groups and ones having three or more groups.

19. (New) The foamed polyimide shaped article as set forth in claim 16, wherein said heat resistant binder is an end-modified imide oligomer obtained by reacting a biphenyl tetracarboxylic acid, an aromatic diamine compound, and 4-(2-phenylethynyl)anhydrous phthalic acid and having a logarithmic viscosity (η_{inh} , 30°C, 0.5 g/100 ml solvent, solvent: N-methyl-2-pyrrolidone) of 0.05 to 1.

20. (New) The foamed polyimide shaped article as set forth in claim 16, wherein the heat resistant binder is an end-modified imide oligomer of the formula:



(wherein, X is an aromatic diamine residual group and n is an integer).

21. (New) The foamed polyimide shaped article as set forth in claim 16, wherein the heat resistant binder has a melt viscosity at the temperature of use of 1 to 1000000 poise.

22. (New) The foamed polyimide shaped article as set forth in claim 16, wherein the heat resistant binder has a glass transition temperature (T_g) of at least 300°C after calcining (curing by heating) and a flexural strength of at least 1300 kgf/cm².

23. (New) The foamed polyimide shaped article as set forth in claim 16, wherein the heat resistant binder is mixed into the pulverized pieces of the pre-foamed polyimide resin mass at a ratio of 2 to 30 wt%.

24. (New) The foamed polyimide shaped article as set forth in claim 16, having a heat resistance free from changes in appearance after a heat resistance test at 300°C for 60 minutes.

25. (New) The foamed polyimide shaped article as set forth in claim 16, wherein the density is 0.01 to 0.8 g/cm³.

26. (New) A process for producing a foamed polyimide shaped article comprising pulverizing a pre-foamed polyimide resin mass, mixing the pulverized pieces with a heat resistant binder selected from the group consisting of polyamic acids and end-modified imide oligomers, molding the mixture to a predetermined shape, then calcining the mixture at a temperature of at least 350°C to cure the binder and strongly bond the polyimide foam mass.

27. (New) The process as set forth in claim 26, wherein the heat resistant binder has a melt viscosity at the temperature of use of 1 to 1000000 poise.

28. (New) The process as set forth in claim 26, wherein the heat resistant binder is a polyamic acid obtained using as an essential component a 2,3,3',4'-biphenyl tetracarboxylic acid component as an aromatic tetracarboxylic acid component.

29. (New) The process as set forth in claim 26, wherein the pre-foamed polyimide resin mass has a density of 0.0005 to 0.1 g/cm³.